Guidelines for the

# ARRA Energy Efficiency Improvement Program For State Facilities



Administered by the
**North Dakota Department of Commerce**

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# Part I – Funding Opportunity Description

## Introduction

The Office of Renewable Energy & Energy Efficiency (OREEE) has received funds through the American Recovery and Reinvestment Act (ARRA) State Energy Program (SEP) for energy efficiency projects in state owned facilities. ARRA was designed to stimulate the local economy and create and retain jobs. In addition, ARRA was developed to help reduce the states dependence on imported energy by funding energy efficiency related projects in North Dakota.

OREEE will be responsible for tracking the required information for the DOE. The results achieved will be assessed according to the following performance metrics:

- Jobs created
- Energy (kWh/therms/gallons/BTUs/etc.) saved
- Renewable energy installed capacity and generated
- GHG emissions reduced (CO2 equivalents)
- Energy cost savings
- Funds leveraged

## Time Table

| Action | by Date |
|---|---|
| Deadline for state agency or institution to submit projects. | 3/31/2010 |
| Review and selection of projects. | 5/31/2010 |
| Close of grants. | 7/30/2012 |

# Part II – Award Information

## Award Description

OREEE will be awarding grant agreements under this program announcement. Grant agreements will be for up to $1,000,000 per state agency or institution for energy efficiency improvements. The application form can be found at http://www.communityservices.nd.gov/stimulus/sep/state-facilities/ .

## Period of Performance
Applications must be received by 4:30pm Wednesday March 31, 2010. The project period for this award will begin no later than June 1, 2010. After the initial award notice, quarterly performance reports will be required. The end date for invoicing OREEE for all projects will be July 30, 2012. A timetable describing the schedule of significant events can be seen in Part I.

## Basis for Payment
As consideration for the services rendered by the recipient under the terms of the grant agreement, OREEE shall provide funds on a cost reimbursement basis. Payments will be based on proof of purchase documents, invoices, or other appropriate supporting documentation and will be provided on a monthly basis.

## Payback
Return on investment projects of ten years simple energy savings payback or less is required. Multiple energy conservation measures (ECM) that are typically identified by investment grade audits by energy services companies are eligible to apply. Multiple ECM's can be aggregated to achieve a low payback.

## Award Notices
OREEE will announce the selected projects by May 31, 2010. Projects will receive funds based on the payment procedures listed under Basis for Payment. The timetable for projects can be seen in Part I.

# Part III – Eligibility Information

## Eligible Applicants and Projects
Eligible applicants include facilities owned by the State of North Dakota and institutions of the North Dakota University System.

A project can consist of one or more energy efficiency improvement activities. Applicants are encouraged to group multiple high-energy saving activities together to maximize effectiveness of program. Eligible activities can include: lighting, insulation, high efficiency heating and cooling equipment, centralized energy management systems, metering/measurement equipment, water heating, high efficiency motors, variable speed drives, commissioning/retro-commissioning, and other elements pertaining to the energy efficiency of a facility.

Applicants are encouraged to undergo comprehensive energy audits to identify major energy conservation measures. Energy audit reports will be accepted as an attachment to the application if applicants adhere to the guidelines provided in Appendix 1.

## Prohibited Use of Funds

Federal regulations prohibit funds to be used for the following:

- Construction of mass transit systems and exclusive bus lanes.
- New construction of buildings or structures.
- Purchase land, a building or structure or any interest therein.
- Subsidize fares for public transportation.
- Subsidize utility rate demonstrations or State tax credits for energy conservation or renewable energy measures.
- Conduct or purchase equipment to conduct research, development or demonstration of energy efficiency or renewable energy techniques and technologies not commercially available.
- Use of funds for gambling establishments, aquariums, zoos, golf courses or swimming pools.

## Leverage

Federal guidance strongly encourages leveraging ARRA funds with other funds. Therefore, leverage of funds from other non-federal source will be on evaluation criteria.

## Supplanting of Funds

Federal guidelines prohibit the supplanting of existing state funds with ARRA funds. However, ARRA funds may be used to supplement a currently budgeted state project.

# Part IV – Application & Submission Information

## Submission Information

Applications (SFN 59258) and supplemental material for this funding opportunity can be found at http://www.communityservices.nd.gov/stimulus/sep/state-facilities/ . Completed applications, ECM forms and any other project information should be submitted by hard copy to:

Zachary Weis
North Dakota Department of Commerce
Division of Community Services
P.O. Box 2057
Bismarck, ND 58502-2057

All application must be into the OREEE no later than 4:30 p.m. CST on 3/31/10.

## Questions

If you have any questions concerning the application process or if you are having trouble with the application form, please contact the office listed below. Applicants are encouraged to visit the programs website http://www.communityservices.nd.gov/stimulus/sep/state-facilities/ in case changes are made to this funding announcement.

**Questions should be directed to:**

Zachary Weis
Phone: 701-328-1022
Email: zweis@nd.gov
or
Joseph Murphy
Phone: 701-777-5431
Email: jmurphy@nd.gov

# Part V – Application Review Information

## Review Criteria

Applications will be evaluated using the following criteria:

### Project Details

Applicants must fully complete the application form SFN 59258. The information on this form will be used in the review of the application. This form includes the following:

- Job creation expected (Project Description).
- Description and scope of project (Project Description).
- Project cost estimate and how it was determined (Project Description).
- Amount of funds requested for project.
- Incremental cost difference.

The Energy Conservation Measure (ECM) form SFN 59259 must be fully completed for every ECM proposed for this project. The ECM form will be used to evaluate each proposed ECM.

Additional to the application form, applicants must include an analysis of the proposed project by a professional engineer registered in the State of North Dakota or other qualified energy design person. The analysis must include the following:

- Energy (kWh/therms/gallons/BTUs/etc.) saved.
- Energy cost reduction.
- Baseline energy use and generation.
- Current Fuel and Electric Consumption

Other required information that will be used for the evaluation of the proposed project:

- Environmental questionnaire for NEPA review (EF1).
- Other Funding Sources.
- Agency or institution DUN's number and Central Contractor Registry (CCR) number.
- Support from State Historical Society Section 106 Clearance (SFN52654)

**Performance Measures**

**Effectiveness:** As measured by the energy (kWh/therms/gallons/BTU's, etc) saved per dollars expended. Examples:

- Annual reduction in natural gas consumption (mmcf) by sector and end-use category.
- Annual reduction in electricity consumption (kWh) by sector and end-use category.
- Annual reduction in electricity demand (kW) by sector and end-use category.
- Annual reduction in fuel oil consumption (gallons) by sector and end-use category.
- Annual reduction in propane consumption (gallons) by sector and end-use category.
- Annual reduction in coal consumption (tons) by sector and end-use category.
- Annual reduction in gasoline and diesel fuel consumption (gallons) by sector and end-use category.

**Simple Payback:** The amount of time to recover project cost based on annual energy cost savings (Installed Cost/Energy Cost Savings).

**Leveraging:** The amount of non-federal funds (state/utility/etc) as a percentage of total projects cost (non-federal funds/total project cost).

**Emission reduction** (tons – $CO_2$ equivalents)

- Carbon
- Methane
- Sulfur Dioxide
- Nitrogen Oxide
- Carbon Monoxide

**Job creation/retention**

- Number
- Type
- Duration

## Other Requirements under ARRA

### Section 1605, Buy American

No funds appropriated by the Act may be used for a public buildings/works project unless "all iron, steel and manufactured goods used are produced in the U.S."

Exceptions are allowed for cases

- Where the head of the federal agency concerned determines adherence would be "inconsistent with the public interest".
- Where iron/steel/manufactures are not produced in the U.S. in sufficient and available quantities.
- Inclusion of U.S. products would increase overall project cost by 25%.

Notice of waiver of the ARRA Buy American requirements must be noticed and justified in federal Register.

### Section 1606, Federal Wage Rate Requirements (Davis-Bacon Act)

Payment of federal prevailing wages to recipients or subrecipients of ARRA funds is required. Specifically, Davis-Bacon Act wage rules apply to all assistance agreements made in whole or in part with ARRA funds.

Information on the current wages for North Dakota can be found on the Davis-Bacon Wage Determinations website at http://www.gpo.gov/davisbacon/. Grantees will be required to maintain weekly certified payroll forms for all laborers, and submit the forms with monthly reimbursement requests.

### National Historic Register

Buildings that are on the National Register of Historic Places need a letter of support from the State Historical Society. Buildings 50 years or older also need a letter of support from the State Historical Society.

## Reporting Requirements

### General Reporting Requirements

Recipients must maintain current registrations in the Central Contractor Registration (*http://www.ccr.gov*) at all times during which they have active federal awards funded with Recovery Act funds. A Dun and Bradstreet Data Universal Numbering System (DUNS) Number (*http://www.dnb.com*) is one of the requirements for registration in the Central Contractor Registration.

Quarterly financial statements (SF 425) and program narrative reports must be submitted no later than the first day of the month after each calendar quarter in which the recipient receives assistance. Quarterly financial statements shall be by budget category of the costs incurred.

### Reporting and Registration Requirements under Section 1512 of the Recovery Act

This award requires the recipient to report on use of Recovery Act funds provided through this award. Information from these reports will be made available to the public through the federal Recovery.gov website.

Section 1512(c) of the Recovery Act require the recipient to submit information relating to jobs created or retained and to identify vendors which receive accumulative payments of $25,000 or more. The reports are due no later than the first day of the month after each calendar quarter in which the recipient receives the assistance under this award. Reporting will continue as required by the grant award. The following information may also be required:

1. Job creation/retention
    - Full-time.
    - Part-time.

2. Energy Savings (kWh equivalents)
    - Annual reduction in natural gas consumption (mmcf), by sector.
    - Annual reduction in electricity consumption (kWh), by sector.
    - Annual reduction in electricity demand (kW), by sector.
    - Annual reduction in fuel oil consumption (gallons), by sector.
    - Annual reduction in propane consumption (gallons), by sector.
    - Annual reduction in gasoline and diesel fuel consumption (gallons), by sector.

3. Energy Cost Savings
    - Dollars saved.

4. Emissions Reductions
    - Amount of green house gases reduced (CO2 equivalents).
    - Amount of criteria air pollutants reduced (tons).

5. Building Retrofits
    - Number of buildings retrofitted, by sector.

6. Building Energy Audits
    - Number of audits performed, by sector.
    - Floor space audited, by sector.
    - Auditor's projection of energy savings, by sector.

7. Building Retrofits
    - Number of buildings retrofitted, by sector.

8. Small-scale Renewable Energy Applications Installed
    - Number and size of solar energy applications installed.

9. Industrial Process Efficiency (kWh equivalents)
    - Reduction in natural gas consumption (mmcf).
    - Reduction in fuel oil consumption (gallons).
    - Reduction in electricity consumption (kWh).

10. Renewable Energy Market Development
    - Number and size of large scale solar energy systems installed.
    - Number and size of large scale wind energy systems installed.
    - Number and size of other large scale renewable energy systems installed.

11. Small-scale Renewable Energy Applications Installed
    - Number and size of solar energy applications installed.
    - Number and size of wind energy applications installed.
    - Number and size of other renewable energy applications installed.

## Supplemental Resources

**Energy Star Portfolio Manager:** Portfolio Manager is an interactive energy management tool that allows you to track and assess energy and water consumption across your entire portfolio of buildings in a secure online environment.
http://www.energystar.gov/benchmark

**International Performance Measurement & Verification Protocol:** Document issued by the Energy Efficiency and Renewable Energy Clearinghouse which contains concepts and options for determining energy and water savings.
http://www.nrel.gov/docs/fy02osti/31505.pdf

# Appendix 1: Audits

Audits may focus on a specific system; however, it is recommended that the agency/ institution perform a full energy audit on the building. Audits performed under this program need to be certified by a professional engineer registered in the State of North Dakota.

**Audit Guidelines**

The following items relate to a full building audit. If the audit focuses on a specific system, use the minimum items (marked in bold).

1. Analysis of two or more years of utility consumption and cost, review of building plans and a walk through of the building itself, to establish:

   - **Type of building, principal use and area, sq.ft.**
   - Energy index: (annual energy use) kBtu/sq.ft./yr.
   - Cost Index: $/sq.ft./yr.
   - **Breakdown of various spaces within the building by function, hours of use and area.**
   - **Determine if efficiency may be affected by building functions which differ from the original functional intent of the building.**
   - **Determine if any operation and maintenance problems or practices may affect efficiency.**

2. Description and analysis of the energy using systems of the building, resulting from on-site observation, measurement, and engineering calculations, including **(use related system for the minimum)**:

   - Building Envelope
   - Lighting
   - HVAC
   - Domestic Hot Water
   - Laundry
   - Food Preparation
   - Conveying Systems
   - Other Systems

3. As a result of engineering analysis and economic calculations, develop:
   - **Breakdown of the components of annual energy use and cost.**
   - **Recommended Energy Conservation Measures, including predicted savings and cost to implement.**
   - **A Description and cost estimate of repairs which are needed in order for Energy Conservation Measures to be effective**.
   - **A Description and cost estimate of Measurement and Verification methods needed to determine the actual effectiveness of Measures.**
   - **Energy Analysis summary (see next section on reporting).**

**Reporting Guidelines**
Audit reports should be arranged in the following format:

- Title Page
  *This page should include a brief title, the building name and location, organization name, the auditor's name and the date the audit was completed.*

- Table of Contents
  *This section does not need to be extremely detailed. The beginning page number of each major section is sufficient.*

- Executive Summary
  *This section must include a nontechnical narrative summary and a tabular summary of Energy Conservation Measures (ECMs). The tabular summary should include the recommended ECMs with estimated cost, estimated energy savings and simple payback period. In the narrative section, the following should be identified: the ECMs that are recommended for implementation, expected savings and other pertinent information. This section must also include an itemization of current fuel and electric unit costs, including demand charges and a short narrative describing the system that the audit involved.*

- Main Body
  ***Explanation of Assumptions***. *Auditor must include a section that explains the general assumptions, variables, procedures and formulas used for the ECMs.*

  ***Fuel and Electric Consumption***. *Monthly fuel and electric consumption for* ***at least*** *the two previous years. The auditor is encouraged to use patterns to determine a reasonable estimate of building energy use.*

  ***Operation and Maintenance***. *Include this section if the auditor determines that savings can be made from changes in O&M. O&M procedures generally refer to no cost and low cost procedures generally associated with building O&M.*

  ***Energy Conservation Measures***. *This section is a detailed analysis of the recommended ECMs.*

  ***Supporting Information.*** *Use this section for all pertinent information to support the ECMs if the information is not included in the prior section.*

- Certification
  *A certification that the Audit was performed, or reviewed, by a Professional Engineer registered in the state of North Dakota*

- Appendices
  *Use as appropriate.*